

A RECORD OF A NORTHERN FREE-TAILED BAT, *CHAEREPHON JOBENSIS* ROOST FROM THE NORTHERN KIMBERLEY, WESTERN AUSTRALIA

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The Northern Free-tailed Bat, *Chaerephon jobensis* has been reported roosting in tree hollows, old wooden structures and also from rock overhangs and caves (Begg & McKean 1982; de Lestang 1929; Lumsden *et al.* 1993; and Troughton 1931). Otherwise very few reports exist of their roosting habits. Here we report the use of a crack in a sandstone cliff in the Kimberley by a colony of *C. jobensis*.

On 14 August 2006 whilst walking along a gorge of the Morgan River in an area known as Josh's Crossing on Theda station, audible squeaks and chirps could be heard from roughly 30m across the gorge. On closer investigation it was noticed that the sounds, initially suspected as high pitched bird calls were in fact being emitted from the cliff face. A long discontinuous crack running horizontally along the

cliff face and roughly 50mm wide was identified approximately 8m high above the river. Guano and urine staining was evident below the crack.

It should be noted here that audible calls emitted during the day have led to the opportunistic discovery of *C. jobensis* roosts in the past. For example, Lumsden *et al.* 1993 discovered a colony inhabiting a dilapidated timber jetty in Derby, W.A after initially hearing and recognizing their social calls coming from within the jetty.

Curiosity sufficiently aroused, a collapsible harp trap (Tidemann & Woodside 1978) was tied off and lowered down the cliff face so that it covered the opening of the rock crevice (Figure 1). Inspection of the trap the next morning, (19 August, 2006), revealed 40 individual *C. jobensis*. As the harp trap did not cover



Figure 1. The harp trap suspended over the entrance to the *Chaerephon jobensis* roost on the Morgan River.

the entire crack it can be assumed that this was a minimum count of the colony.

Approximately 30m upstream along the same rock fracture of the cliff face, 21 Northern Bent-winged Bats, *Miniopterus orianae* were also captured. The

cavity here began as a crack roughly 50mm wide and then opened to a small cave-like entrance approximately 50cm in height. Both roosts appeared mutually exclusive with neither species being captured from both roosts.

These fractures in the cliff face are below the high water mark and therefore would flood in the wet season when the river rises. Interestingly Begg & McKean (1982) report a similar situation from Katherine Gorge in the Northern Territory, with a cave found within the depths of an overhang of the gorge cliff face home to several *C. jobensis*. They indicated that this cave too would also flood during the wet. Conceivably the action of flooding water during the wet season could serve the purpose of washing out accumulated faeces and parasites from the roost.

Given the structure of the rock crevice it can be assumed that *C. jobensis* could roost in this type of habitat more frequently than observed due to the inaccessibility of most cliff faces. Additionally as reported elsewhere (Hamilton-Smith 1966; Lumsden *et al.*, 1993), the propensity of this species to fit in narrow cracks and its ability to retreat deeper within may result in an under-reporting of roosting sites.

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REFERENCES

- BEGG, R.J. & MCKEAN, J.L. 1982. Cave dwelling in the molossid bat *Tadarida jobensis colonicus*. *Northern Territory Naturalist* 5: 12.
- DE LESTANG, A. 1929. A bat colony. (*Chaerephon plicatus colonicus*) in North Queensland. *Australian Zoologist*. 6: 106–107.
- HAMILTON-SMITH, E. 1966. The geographical distribution of Australian cave-dwelling *Chiroptera*. *International Journal of Speleology*. 2(2): 91–104.
- LUMSDEN, L.F., JOHNSTONE, P.D. & TEMBY, I.D. 1993. 'A roosting colony of the Northern Mastiff-bat *Chaerephon jobensis* at Derby, Western Australia', *Australasian Bat Society Newsletter*. 2: 13–15.
- TIDEMANN, C.R. & WOODSIDE, D.P. 1978. A collapsible bat-trap and a comparison of results obtained with the trap and with mist-nets. *Australian Wildlife Research*. 5: 355–362.
- TROUGHTON, E. LE G. 1931. Three new bats of the genera *Pteropus*, *Nyctimene*, and *Chaerephon* from Melanesia. *Proceedings of The Linnean Society of New South Wales*. 56: 204–209.